

Conservation Practice Fact Sheet

December 2015

Introduction and Purpose

Adaptive management is a systematic process to collect, monitor, analyze, and learn from results of evaluations of practices conducted on growers' fields. The goal of the adaptive management approach is to test and evaluate how a practice can best be applied on a given farming operation or site condition.

The purpose of this fact sheet is to provide guidance to plan and implement adaptive management of the Delaware NRCS conservation practice standard for Nutrient Management (590).

Guidelines for Adaptive Management Application for Nutrient Management

1. Follow the guidance in the NRCS Agronomy Technical Note 190-AGR-7, *Adaptive Nutrient Management Process*;
2. The evaluation should be carried out for at least 3 years and preferably on the same area each year. There may be cases where this is not practical;
3. The application and hypothesis of at least one variable must address and meet the criteria and specifications of Nutrient Management (590). Application will result in adopting the four R's of nutrient management (right source, right rate, right timing and right placement), and be approved by the State Resource Conservationist. Example trials/evaluations may include:
 - a. Compare the use of controlled release fertilizers;
 - b. Compare leguminous cover crops as a nitrogen source for commodity crops;
 - c. Compare in-season tests for determining supplemental nitrogen applications.
4. The evaluation should include the services of a private consultant or representative of Delaware Cooperative Extension certified in nutrient management planning and implementation to help plan the evaluation, lay out the four replicated plots, monitor the plots during the season, assist in gathering the required data (e.g., yield, soil tests, residue counts, soil health measurements, etc.), and analyze the data that will support the purpose of the evaluation;
5. The evaluation can focus on one or more results. For example, data may be collected not only to address yield but also changes in soil health parameters such as aggregate stability, infiltration, organic matter, etc. The results are used to make nutrient application decisions to address water quality degradation issues and nutrient use efficiencies;
6. The evaluation should include data analysis each year and at the end of the trial period (usually 3 years);
7. The annual and final results and analysis should be jointly reviewed with NRCS, the grower, and consultant involved. Final results will be presented at an on-farm field day hosted by the grower.



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